情感测试中的蜕变测试

1.对于不同层次的SA来说，输入时不一样的，有句子输入，文档输入以及层次输入
SA的输出：（l,p）其中l代表的是输入数据的情感类型（积极，消极，中立的），以及描述情感程度的p（0-1）
对于不同的情感类型来说，p的大小代表的程度不一样。对于正向的情感，p越大代表越正向。而对于负面的情感，p越小的代表越负面

2.在该实验中每种蜕变关系都包含有一种对输入的扰乱，这样如果输入有变化的话我们可以很明显的从输出感知到这种变化，说明这个SA还不错。不同人对同一个事物表达出同一种情感的方式不一样，而SA系统应该能处理这个问题。值得一提的是，即使结果显示表现出MR的偏差，这也只能说明SA系统对于这个关系的处理能力有问题，并不能说明这个SA系统本身的情感判断有问题。因为该实验的MR设计都是从用户的角度来设置的（？）

3.句子输入的蜕变关系：这些关系包括但不限于改变句子的时态，缩写扩写，大写，加语气助词，交换被比较的对象等，

MR	Interpretation of MR satisfaction	Example MG (I_s, I_f)
MR1.1	SA treats abbreviations or contractions and full forms in a similar way.	("don't dismiss this film because of its sources.", "do not dismiss this film because of its sources.'
MR1.2	SA is capable of handling different synonyms.	("I want to buy a bike.", "I want to buy a bicycle.")
MR1.3	SA treats singulars and plurals in a similar way.	("I buy a book.", "I buy some books.")
MR1.4	SA treats '!' as a form of emphasis.	("It's a great day.", "It's a great day!")
MR2.1	SA is capable of handling different emphasizing adverbs.	("The apple is sweet.", "The apple is very sweet.")
MR2.2	SA is capable of handling negations.	("The weather is bad.", "The weather is not bad.")
MR3.1	SA is insensitive to the cases of words.	("it'll make sense when you see it.", "IT'LL MAKE SENSE WHEN YOU SEE IT.")
MR3.2	SA treats the capitalized words as a form of emphasis.	("The flower is beautiful.", "The FLOWER is BEAUTIFUL.")
MR4.1	SA is insensitive to the tense of the sentence.	("The storyline is as cliched as they come.", "The storyline was as cliched as they come.")
MR4.2	SA is insensitive to the order of words connected by some conjunctions.	("The film is wonderful and exciting.", "The film is exciting and wonderful.")
MR4.3	SA is insensitive to different conjunctions.	("Although I like it, I will not buy it.", "I like it, but I will not buy it.")
MR4.4	SA is insensitive to different comparative descriptions.	("The car is faster than the bicycle.", "The bicycle is slower than the car.")
MR4.5	SA is sensitive to the orders of comparative objects.	("The car is faster than the bicycle.", "The bicycle is faster than the car.")

4.而对于文件层面的蜕变关系的设计就有些不同，比如改变句子的顺序。还有就是在改变句子顺序的基础上将句子情感相同的聚类在一起。更进一步的是根据p的大小进行排序（先情感分类）。
除了分类之外还有一种就是往文档里面加入情感明显的句子。例如往文档里面逐渐加入情感正向的句子，随着文档的增加，往每一个文档里面加入句子的数量也在增加，这样这些文档的输入应该呈现应该递增的趋势。当然也可以往其中加入情感负面的句子。当然还可以删除文档中的句子（前提是这个文档本身的情感倾向不是中立的）：将文档中情感类型和文档的情感类型相同（相反）的句子全部移除（当然不包括中立的情感）。

5.实验的步骤分析：
将一系列的源输入通过蜕变关系蜕变得到一系列的MGs，即蜕变关系组，这个蜕变关系组中只包含一个源输入和一个蜕变得到的后继输入。将这些蜕变关系组进行情感测试，并处理分析这些输入的输出，看每个组的输出是否符合预先蜕变关系处理后预期的输出。

6.FS的判断：
（1）.在文档层次建立的蜕变关系，如果预期的蜕变关系的结果是相等的话，那么那些没有违背关系的蜕变关系组就会被数据集提供的源输入里的信息自动检测

（2）.剩下的就只能靠人工来判断了，因为样本量太大，所以一般进行抽样的方法进行人工检测。